



*Dendrobates tinctorius*  
(2 White morph variants).

# AMERICAN DENDROBATID GROUP

Newsletter No. 30

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*Ectotherm Scientific*

## STATEMENT OF PURPOSE

The purpose of the American Dendrobatid Group (ADG) is to educate enthusiasts and distribute information on all aspects of Dendrobatid husbandry and captive propagation, and to develop better communication between Dendrobatid breeders. The ADG is also interested in the maintenance and propagation of Mantellid frogs, Atelopid toads, and other unusual frogs and toads. Its format and bimonthly distribution are designed to provide current information and new developments in the hobby. This Newsletter appears six times a year at a cost \$15.00 per calendar year. Back issues are \$3.00 each, or on a yearly basis: 1992 is available for \$5.00; 1993 and 1994 for \$10.00/year, and 1995 for \$12.50.

Subscriptions, comments, articles, photographs, etc. should be sent to Charles Powell (2932 Sunburst Dr., San Jose, CA 95111 Tel.: (408) 363-0926).

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## Notes from the Editor

I want to thank all the people who made the year Newsletter's a success: Mark Bajcar, Paul Bolognese, Marco Esposito, Jack Frenkel, Ron Gagliardo, Ian Hallett, Ian Hiler, Anthony Hundt, Kay Klausung, Matthias Kneller, John Lewis, Brian Monk, Christian Som, George Sprackland, Jim Uhey, Gerd Voss. Thanks to all. I'd also like to request articles for next year. Please consider writing an article today and if you want help give me a call.

Please fill out the enclosed 1997 membership form and help support the American Dendrobatid Group. Remember the ADG Newsletter will appear only four times next year, but each issue will increase in size to compensate.

## Trial and error with *Dendrobates histrionicus*

Ron Gagliardo  
Atlanta, GA

Notoriously difficult to keep and breed, *Dendrobates histrionicus* is nonetheless in high demand and low supply. Most all adult *D. histrionicus* coming into the US in the past years have been wild caught and with habitat destruction playing such a significant role in the disappearance of many flora and fauna, captive breeding techniques will certainly help reduce the demand for wild caught animals to some degree. Five adults were acquired in January 1995 from a local reptile wholesaler. These were of the "Valley" morph, from lowland Ecuador. This is a small frog (up to 4 cm), usually bright orange with brown or black netting. While in Ecuador in December 1995, I spoke with an exporter of these frogs. He assured me they were captive bred in large outdoor "enclosures" measuring 10 x 30 meters. He did not feed or otherwise manipulate the frogs, but only harvested limited numbers of adults. These frogs are exported with CITES permits in limited quantities. The five I acquired were established in a 30 gallon aquarium intensely planted with aroids, bromeliads and selaginella. The frogs settled in well, eating heartily on daily

feedings of fruit-flies and termites. Within a week, two males were calling and one was immediately moved to a 15 gallon tank with a presumed female. Back in the 30 gallon, where a trio (1.2) remained, an egg clutch was discovered within a couple days. The eggs were left on a bromeliad (*Guzmania albarosea*), but disappeared after 2 days. In the coming weeks, several more clutches were noticed, some of which were fertile and started to develop in situ, but seem to be cannibalized or trampled; which was frustrating. Finally, an attempt was made to hatch the eggs outside of the terrarium. One clutch of three eggs was removed and placed in a clean petri dish and kept at 75-80 degrees F with no exposure to light. One egg fungused within a day and the others started to develop. After 12 days, a second developing egg went bad, leaving one tadpole that hatched at the 14 day mark. The tadpole was placed in a 60 mm petri dish and placed back into the tank. Within 1 hour, one of the females was investigating, but became startled and moved away. Two hours later, the tadpole was gone! Upon investigation, a tadpole approximately the same size was found in the axil of a *Guzmania sanguinea*. It is not known if this tadpole is the same one that was in the petri dish. Feeder eggs were noticed in the axil the following day. Unfortunately, for reasons unknown, the tadpole was not seen after the following day and no neonate frogs were noted. So much for manipulating the tadpoles and putting them back into the tank.

The next attempt to raise *D. histrionicus* tadpoles involved hatching the eggs and raising the tadpoles outside the tank completely. The trio was producing two clutches of up to 7 eggs every 10 days, so there was material to work with. On repeated occasions, tadpoles were hatched and fed "confiscated" eggs, but none ever developed past the hind leg stage! The "feeder" egg deposited by the female may have different components than the actual reproductive egg that were harvested to feed the tadpoles. Several months and nearly 100 eggs went into raising tadpoles, with no luck.

In early May 1996, just prior to moving the tank to a new facility, the second pair was added to the 30 gallon tank containing the trio. This caused a major disturbance and a little sparring action was noticed. All five animals learned to live somewhat in harmony while the move took place at the end of May. Three weeks later, a neonate, approximately 8 mm long, was discovered in the *Guzmania sanguinea* leaf axil! The next day, two additional neonates (approx. 8 mm) were found. To my surprise, these frogs had raised three healthy froglets in a 30 gallon tank that had been thrown in the back of pickup and moved several miles! The neonates were removed and raised on springtails, termites and *Drosophila*. So far their color is very close to that of their parents. One frog that seemed 30% smaller and somewhat faded, was found dead after 6 weeks, but the remaining two animals are eating well and growing fast, nearly 18 mm as of August 15. The trio was again established by removing the pair introduced in early May. The tanks were completely cleaned out and replanted and again to my surprise, eggs were found in both tanks within 72 hours! No new tadpoles have been found in either tank, but disturbance has been kept to a minimum.

In the Fuqua Conservatory at the Atlanta Botanical Garden, we released several adult *D. histrionicus* in late January 1996. A pair has been observed courting among some large *Vriesea splendens* and *Streptocalyx* sp. Eggs and fully developed tadpoles were found in the *Streptocalyx*, which was a surprise due to the notoriously nasty spines on the leaf blades. About 10 days later, a well developed *D. histrionicus* tadpole was found in a *Vriesea* hybrid (about 3 meters away from the egg laying site described above) that had nearly rotted out and was taken out to be cleaned. The tadpole (1.8 cm) was transferred to a 100 mm petri dish and placed in the tank with the *D. histrionicus* trio. The water is changed every other day and it appears the tadpole is being fed. Egg cases and soil

mix debris are common in the petri dish but the tadpole is developing hind legs at the moment! A *D. reticulatus* egg offered the tadpole was consumed. At this point, we have high hopes in the foster parents! Our next project focuses on the *D. histrionicus* in the conservatory and whether a breeding colony of obligate egg feeders can be established in a public rainforest display.

In addition, we are working with two other color morphs, the bulls eye and also a large yellow morph from Colombia. Any ideas, comments or suggestions would be much appreciated.

## ANNOUNCEMENTS

### Auction of misting system by Ecologic Technologies.

The donation of a complete misting system by Ecologic Technologies is being auctioned off to the highest bidder by 1 January 1997. The system was donated to help defray expenses for Frog Day but was lost in transit, arriving two weeks after Frog Day. This misting system comes complete with the new upgraded high pressure pump, 1 master single nozzle misting module, 1 standard single nozzle misting module, 20 feet of high-pressure tubing, installation package, 5-gallon reservoir, and a wonderful 12-cycle digital timer. This package retails for \$309.00 but will go to the highest bidder. Bids can be sent or phoned to the Newsletter editor (Charles Powell, 2932 Sunburst Dr., San Jose, CA 95111-2264 Tel.: (408) 363-0926) and the highest bid at the first of the new year will be contacted and arrangements for payment and shipment will be made. For further information send a SASE to the Newsletter editor for literature. Also you can refer to ADG Newsletter No. 28 for a review of the misting system.

### A chance to help in the study of the blue color common in several species of poison frogs.

"My research interests are specifically in how blue coloration is achieved by amphibians. I have been working on various aspects of amphibian pigmentation for the last ten years, and I have become most interested in the ultrastructure of pigment cells in blue skin. In fact, I will be presenting an invited paper on this topic at the XVI<sup>th</sup> International Pigment Cell conference on October 31 in Anaheim, California. I have examined skin of several unusual or mutant frogs of species that are typically green (e.g., *Rana clamitans*), but I would much prefer to look at blue skin of species that are typically blue such as the blue legs of *Dendrobates tinctorius* or especially the blue skin of *D. azureus*. One of the best methods I have found for my research is to mount full-thickness skin biopsies on microscope slides and then examine them with a special reflected light microscope. Photomicrographs taken this way reveal the beautiful true-color contributions of individual pigment cells to the overall color of the skin that we perceive from a distance.

"You mentioned the possibility of making a request for research material through the Newsletter, and I would like to do that. The skin samples I use are usually very small (about 2-4 mm<sup>2</sup>) and the frogs can survive the "donation" quite well. If any of the ADG members would be willing to supply me with living or fresh-frozen specimens I would certainly cite them in any publications resulting from the research and cover any costs for transporting the specimens."

If anyone can help Dr. Philip Fernandez with his study please contact him at the Department of Biology, Grand Canyon University, 3300 W. Camelback Road, Phoenix, AZ 85017. Office phone: (602) 589-2575, Fax: (602) 589-2716. I recommend that anyone who can help Dr. Fernandez do, this is a wonderful chance for ADG members to further knowledge related to our wonderful charges. If you have a frog which is dying freeze it and arrange for it to be sent to Dr. Fernandez; if you are producing baby frogs see if you can arrange to send Dr. Fernandez some which he can

biopsy and then return. Make your hobby count for something.

## NEW LITERATURE

### Dendrobatids

Armitstead, Paul, 1996, In search of *Dendrobates* 3: Panama, June 1995. British Dendrobatid Group Newsletter, No. 27: 3-5.

Furnweger, Karen, 1996, Disappearing Frogs. *Aquaticus*, Journal of the Shedd Aquarium, 26(1): 41-60.

Goodman, Nancy, 1996, Fantastic frogs. *Aquaticus*, Journal of the Shedd Aquarium, 26(1): 5-24.

LaMarca, Enriqueta, 1996, Frogs of the genus *Mannophryne*. British Dendrobatid Group Newsletter, No. 27: 9-11.

### ADS:

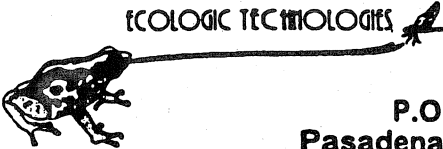
Rates for business card adds are \$10 per issue or \$50 per year. If you are interested please contact the Newsletter editor.

REPTILE SPECIALTIE (John Uhern, 7473 Foothill, Tujunga, CA 91042 Tel. (818) 352-1796; Fax (818) 353-7381) has various captive breed Dendrobatids and wild imported *Mantella* for sale. Write or call for information.



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### For Sale

Ads for sale of frogs, or requests or offering of breeding loans, etc. are free to members and will run for two issues only, unless the Newsletter editor is notified.

*Dendrobates reticulatus* tadpoles \$30 ea.  
froglets F1 (quantity discount available) \$35 ea.

Melissa Gaglardo  
317 SW 9th Ave. E  
Fort Lauderdale, FL 33312  
(954) 767-6059

*Dendrobates tinctorius* 'cobalt', 'giant orange,' and 'white,' and some *Dendrobates azureus*. Ted R. Kahn (P. O. Box 1375, Sterling, VA 20164-1375. Tel.: (703) 242-4543.

*Dendrobates leucomelas* 'orange' \$40 ea.  
(5 or more for \$35 ea.)  
*Dendrobates tinctorius* 'cobalt' \$50 ea.  
(5 or more for \$45 ea.)

Anthony Leiro  
402 Holly Lane  
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Starter cultures (extra large) of confused flour beetles. Easy to maintain. Excellent source of protein. Extremely prolific breeders. Poison frogs of all sizes from froglets to adults love both larvae and adults. \$10/culture or 2/\$15. Instructions included. Contact Jeff McClure (1331 Longfellow Dr., Clarksville, IN 47729. Tel.: (812) 944-5859.

<i>Dendrobates reticulatus</i>	\$35 ea.	Jane Merkel
<i>Epipedobates tricolor</i> 'maroon/blue'	\$25 ea.	3407 Manhattan Ave.
		St. Louis, MO 63143
		(314) 644-3705

<i>Epipedobates tricolor</i> 'burgundy/blue'	\$30 ea.	Patrick Nabors
<i>Epipedobates tricolor</i> 'burgundy/white'	\$30 ea.	(309) 662-2609

<i>Dendrobates auratus</i> 'Costa Rica'	\$25 ea.	Eric Pflaging
<i>Dendrobates leucomelas</i>	\$60 ea.	Hillside Herps
10% discount for ADG members		220 Hillside Dr.
		Clermont, FL 34711
		(352) 242-1616

*Dendrobates auratus*, metallic green netting pattern. Captive bred from unrelated stock. Extremely rare and beautiful. \$35 ea. AHP Farm, (808) 263-0762.

<i>Dendrobates auratus</i> 'Panama/ mostly black'	\$40 ea.	Charles L. Powell
<i>Dendrobates ventrimaculatus</i> 'Peru/Orange'	\$55 ea.	2932 Sunburst Dr.
Tadpoles		San Jose, CA 95111
<i>Dendrobates tinctorius</i> 'pallid'	\$50 ea.	(408) 363-0926
<i>Dendrobates ventrimaculatus</i> 'Peru/Orange'	\$45 ea.	

**Wanted:**

<i>Dendrobates auratus</i> 'blue' or 'green' - male	Odo N. Dietel
<i>Dendrobates leucomelas</i> 'yellow' - female	369 Acorn Ave.
	Telford, PA 18969
	(215) 721-0329

<i>Dendrobates fantasticus</i>	Brian Lange
<i>Dendrobates tinctorius</i> 'cobalt' - female	2010A S 9th St.
<i>Epipedobates silverstonei</i>	Manitowoc, WI 54220
<i>Phyllobates aurotaenia</i>	(414) 683-1759

<i>Dendrobates tinctorius</i> 'Brazil'	Jeff Lee
	910 Constitution Dr., #718
	Durham, NC 27705
	(919) 382-3059

<i>Dendrobates fantasticus</i> - male	Charles Powell
	2932 Sunburst Dr.
	San Jose, CA 95111-2264
	(408) 363-0926

## **Societies**

**AMERICAN TARANTULA SOCIETY:** For enthusiasts and scientists. Forum magazine (6/yr) educational, entertaining and readable. Over 150 Accurate scientific & common names of tarantulas and scorpions in each issue. Contact: ATS, P. O. Box 2594, S. Padre Island, TX 78597. \$15/year US, \$20 Canada, \$30 elsewhere.

**INTERNATIONAL HYLID SOCIETY:** A non-profit organization dedicated to treefrogs enthusiasts worldwide. "The Bulletin of the International Hylid Society" will be published quarterly starting in January/February 1996. Membership is \$15/calendar year. For information or membership contact: William Brown, Amphibian Conservation and Research Center, 2607 Thomas Road, Valparaiso, IN 46383 USA. Tel: (219) 464-1922; e-mail: 102436.2415 @compuserve.com.

## **NEW MEMBERS**

William Alder (British Columbia, Canada)

Walter Brust (New Jersey)

Anthony Calisi (Florida)

Gary Chamberlain (Pennsylvania)

Mark Forman (California)

D. Lynn Frederick (Pennsylvania)

Andrew Hauty (Vermont)

Jim Hoffman (Minnesota)

Marilyn Kerst (Maryland)

Craig Lindstrom (Utah)

Sandy Oldershaw (Massachusetts)

Mike Provenzano (Illinois)

Craig Stanford (California)

Ysutomu Yamakoshi (Japan)

## **1996 ADG MEMBERSHIP LIST**

Aaron Gross, Jana (2702 Paoli Pike, #172, New Albany, IN 47150)

Acre, Howard A. (811 McKays Ct., Brentwood, TN 37027)

Adamany, Karen (23760 Lucille Dr., North Olmsted, OH 44070)

Adamek, John (530 Killarney Pass Circle, Mundelein, IL 60060)

Adamson, Shane (3124 NE Meriden Rd., Topeka, KS 66617)

Alder, William J (P. O. Box 414, Merville, British Columbia, Canada V0R 2MD)

Alton, Doug (771 Coleman Ave., San Jose, CA 95110)

Anderson, Eric B. (12231 Newberry Rd., Gainesville, FL 32607)

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 Blackburn, Chip (319 Mt. Vernon Ave., Alexandria, VA 22301)  
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 Bologuese, Paul (95 Ludington St., Buffalo, NY 14206)  
 Boylan, John K. (3644 May Rd., Richmond, CA 94803)  
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 Brown, Will (2607 Thomas Rd., Valparaiso, IN 46383)  
 Burlew, Matthew J. (77 Valley St., Springfield, VT 05156)  
 Burst, Walter (18 Massa Lane, #A1, Edgewater, NJ 07020)

Calisi, Anthony J. (419 Baywood Circle, Harbor Oaks, FL 32127)  
 Callaway, Diane (Omaha's Henry Doorly Zoo, 3701 S. 10th St., Omaha, NE 68105)  
 Carey, Neil (P. O. Box 9752, Rancho Santa Fe, CA 92067)  
 Carlson, Darrell T. (732 Mountain View Rd., Reading, PA 19607)  
 Casanova, Juan (813 N. W. 23 Ct., Miami, FL 33125)  
 Chamberlain, Gary (1700 Butler Pike #10C, Conshohocken, PA 19428)  
 Chatterton, Terry (P. O. Box 622, Kiowa, CO 80117)  
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